

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims

1. (Currently Amended) A cross-linkable or cross-linked rubber composition which is usable for constituting a tire tread, comprising:

- an elastomeric matrix comprising at least one diene elastomer which comprises a carboxylic acid function at one or at each of its two chain ends, and

- a reinforcing filler comprising a reinforcing inorganic filler,

wherein said diene elastomer has a number average molecular weight which is greater than 80,000 g/mol, and comprises a majority quantity in said elastomeric matrix.

2. (Original) The cross-linkable or cross-linked rubber composition of Claim 1, wherein said diene elastomer is selected from the group consisting of a butadiene/styrene copolymer and a butadiene/styrene/isoprene copolymer.

3. (Original) The cross-linkable or cross-linked rubber composition of Claim 1 wherein said reinforcing inorganic filler comprises a quantity equal to or greater than 40 phr (parts by weight per hundred parts of diene elastomer(s)).

4. (Original) The cross-linkable or cross-linked rubber composition of Claim 3 wherein said reinforcing inorganic filler comprises a mass fraction greater than 50% of the reinforcing filler.

5. (Original) The cross-linkable or cross-linked rubber composition of Claim 1, wherein said reinforcing inorganic filler comprises silica.

6. (Original) The cross-linkable or cross-linked rubber composition of Claim 4, wherein said reinforcing inorganic filler comprises silica.

7. (Original) The cross-linkable or cross-linked rubber composition of Claim 1, wherein said reinforcing inorganic filler comprises carbon black that is surface-modified by silica.

8. (Original) The cross-linkable or cross-linked rubber composition of Claim 1, further comprising a reinforcing inorganic filler/diene elastomer bonding agent.

9. (Currently Amended) A process for the preparation of a cross-linked rubber composition, said rubber composition comprising:

- an elastomeric matrix comprising at least one diene elastomer having a carboxylic acid function at one or at each of its two chain ends, and

- a reinforcing filler comprising a reinforcing inorganic filler, wherein said diene elastomer has a number average molecular weight greater than 80,000 g/mol, and said elastomeric matrix comprises a majority of said diene elastomer

said process comprising:

thermomechanically working the constituents of the composition with the exception of a cross-linking system in a first phase at a maximum temperature of between 130° and 200°C,

said first phase comprising:

- (a) mixing the composition constituents, with the exception of the antioxidant, with all the zinc monoxide to activate cross-linking and

- (b) mixing the product of (a) with an antioxidant and with no zinc monoxide,

and in a second phase, mechanically working the product of the first phase together with the cross-linking system at a temperature of less than that of the first phase.

10. (Original) A tread for a tire, comprising the rubber composition of Claim 1.

11. (Currently Amended) A tire tread prepared according to the process of Claim 9, wherein said tire tread is formed of said rubber composition.

12. (Original) A tire having reduced rolling resistance, comprising the tread according to Claim 10.

13. (Original) A tire having reduced rolling resistance, comprising the tread according to Claim 11.